

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants:	Ray Siuta, et al.	Examiner:	Daniel I. Walsh
Serial No.:	10/781,197	Group Art Unit:	2876
Filed:	February 18, 2004	Docket No.:	200300281-1
Title:	Secure Currency		

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**APPEAL BRIEF UNDER 37 C.F.R. § 41.37**

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This Appeal Brief is filed in response to the Final Office Action mailed July 27, 2006 and Notice of Appeal filed November 6, 2006.

**AUTHORIZATION TO DEBIT ACCOUNT**

It is believed that no extensions of time or fees are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required (including fees for net addition of claims) are hereby authorized to be charged to Hewlett-Packard Development Company's deposit account no. 08-2025.

### **I. REAL PARTY IN INTEREST**

The real party-in-interest is the assignee, Hewlett-Packard Company, a Delaware corporation, having its principal place of business in Palo Alto, California.

### **II. RELATED APPEALS AND INTERFERENCES**

There are no known related appeals or interferences known to appellant, the appellant's legal representative, or assignee that will directly affect or be directly affected by or have a bearing on the Appeal Board's decision in the pending appeal.

### **III. STATUS OF CLAIMS**

The following is the status of the claims:

claims 1 – 17 are finally rejected;  
claims 18 – 21 are allowed;  
claims 22 – 52 are canceled; and  
claims 53 – 62 are finally rejected.

The rejection of claims 1 – 17 and 53 – 62 is appealed.

### **IV. STATUS OF AMENDMENTS**

No amendments were made after receipt of the Final Office Action. All amendments have been entered.

### **V. SUMMARY OF CLAIMED SUBJECT MATTER**

The following provides a concise explanation of the subject matter defined in each of the claims involved in the appeal, referring to the specification by page and line number and to the drawings by reference characters, as required by 37 C.F.R.

§ 41.37(c)(1)(v). Each element of the claims is identified by a corresponding reference to the specification and drawings where applicable. Note that the citation to passages in the specification and drawings for each claim element does not imply that the limitations from the specification and drawings should be read into the corresponding claim element or that these are the sole sources in the specification supporting the claim features.

The Summary section provides various overviews of exemplary embodiments. Paragraph [0004] states that in one embodiment:

a secure document comprises a pliable fabric comprising human-readable information. The secure document further comprises a memory attached to the pliable fabric in which machine-readable information about the secure document is stored. The secure document further comprises an interface attached to the pliable fabric and coupled to the memory that, when a reader device reads the secure document, transmits at least a portion of the machine-readable information stored in the memory to the reader device.

Further, support for each claim separately argued in the appeal is provided below:

1. A secure document (Fig. 1, #100), comprising:

a pliable fabric (#102) comprising human-readable information (#104, para [0027]);

a memory (#114) attached to the pliable fabric in which machine-readable information about the secure document is stored ([0030]); and

an interface (#122) attached to the pliable fabric and coupled to the memory that, when a reader device (#316) reads the secure document, transmits at least a portion of the machine-readable information stored in the memory to the reader device, wherein the machine-readable information includes data of plural transactions in which the secure document was previously used (para [0030, 0032]).

4. The secure document of claim 3, wherein the artwork comprises a bar code (#110, para [0028-0029]).

5. The secure document of claim 4, wherein the bar code comprises a watermark (para [0028]).

8. The secure document of claim 1, further comprising a sensor (#120), wherein when the secure document is read by the reader device, information generated by the sensor is supplied to the reader device (para [0031 – 0033]).

9. The secure document of claim 8, wherein the sensor detects a chemical signature (para [0094]).

10. A currency (Fig. 1, #100), comprising:

- a pliable fabric (#102) comprising human-readable currency information (#104, para [0027]); and

- a security module (#112) comprising:

- a memory (#114) attached to the pliable fabric in which machine-readable currency information and authentication information are stored (para [0030]); and

- a radio frequency interface (#122) attached to the pliable fabric and coupled to the memory (para [0030], [0032]); and

- wherein the authentication information indicates whether a radio frequency reader device (#316) is authorized to communicate with the currency so data can be read from and written to the memory (para [0032], [0036]).

11. The currency of claim 10, wherein the human-readable currency information comprises at least one of a human-readable identifier and a human-readable denomination (para [0027], [0028]).

16. The currency of claim 10, wherein the memory stores information indicating whether the currency previously communicated with a radio frequency reader device (para [0030]).

17. The currency of claim 10, further comprising an integrity meter (#120) that determines the integrity of a connection between the security module and the pliable fabric (para [0031]).

53. A currency (Fig. 1, #100), comprising:

a pliable fabric (#102) having human-readable currency information (#104, para [0027]);

a memory (#114, [0030]);

an interface (#122) for communicating with a reader device (#316, para [0030], [0032]); and

a security module (#112) that authenticates the reader device in order to authorize data to be written to and read from the memory (para [0030 – 0032].

57. The currency of claim 53, wherein the memory stores information regarding whether the memory was previously accessed from a reader device (para [0030]).

58. The currency of claim 53, wherein the memory stores information regarding whether the currency was previously tampered with (para [0030], [0031]).

62. The currency of claim 53, further comprising a decoder (#132) implemented as a finite state machine (para [0039]).

## **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

Claims 1 – 3 are rejected under 35 USC § 103(a) as being unpatentable over USPN 6,070,794 (Niwata).

Claim 4 is rejected under 35 USC § 103(a) as being unpatentable over USPN 6,070,794 (Niwata) in view of US 2003/0222137 (Nishimura).

Claim 5 – 7 are rejected under 35 USC § 103(a) as being unpatentable over USPN 6,070,794 (Niwata) in view of US 2003/0222137 (Nishimura) and USPN 4,855,584 (Tomiya).

Claim 8 – 9 and 59 are rejected under 35 USC § 103(a) as being unpatentable over USPN 6,070,794 (Niwata) in view of USPN 5,971,282 (Rollender).

Claim 10 – 16, 53 – 55, 57, 58, and 60 – 62 are rejected under 35 USC § 103(a) as being unpatentable over USPN 6,070,794 (Niwata) in view of US 2005/0116816 (Nitou).

Claim 17 is rejected under 35 USC § 103(a) as being unpatentable over USPN 6,070,794 (Niwata) in view of US 2005/0116816 (Nitou) and US 2005/0023361 (Ikefuji).

Claim 56 is rejected under 35 USC § 103(a) as being unpatentable over USPN 6,070,794 (Niwata) in view of US 2005/0116816 (Nitou) and USPN 6,669,100 (Rogers).

Claim 59 is rejected under 35 USC § 103(a) as being unpatentable over USPN 6,070,794 (Niwata) in view of USPN 5,971,282 (Rollender) and US 2005/0116816 (Nitou).

## **VII. ARGUMENT**

The rejection of claims 1 – 17 and 53 – 62 is improper, and Applicants respectfully request withdraw of these rejections.

The claims do not stand or fall together. Instead, Applicants present separate arguments for various independent and dependent claims. Each of these arguments is separately argued below and presented with separate headings and sub-heading as required by 37 C.F.R. § 41.37(c)(1)(vii).

### **Claim Rejections: 35 USC § 103(a)**

Claims 1 – 3 are rejected under 35 USC § 103(a) as being unpatentable over USPN 6,070,794 (Niwata). Applicants respectfully traverse.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art cited must teach or suggest all the claim limitations. *See* M.P.E.P. § 2143. For at least the following reasons, Applicants assert that the rejection does not satisfy these criteria.

Independent claim 1 recites elements that are not taught or suggested in Niwata. By way of example, claim 1 recites a secure document that is “a pliable fabric.” By contrast, Niwata teaches a card similar to a credit card. A credit card, however, is not a “pliant fabric.”

Niwata repeatedly teaches that his card is used in a traditional manner as a hard, rigid card. For example, the card in Niwata is inserted into or attached to a card reader for reading information on the card (see col. 1, lines 24-32; col. 8, lines 56-60; col. 11, lines 8-11). Nowhere does Niwata teach or even suggest that his card is a “pliant fabric.”

Applicants respectfully ask the Board of Appeal to construe the terms in the claim in accordance with their plain meaning (see MPEP § 2111.01). Further, Applicants’ specification clearly supports the meaning of a pliant fabric:

Pliable fabric 102 is “pliable” in that fabric 102 allows the secure currency 100 to be handled in the same general manner as conventional paper currency including, for example, by allowing the secure currency 100 to be folded or curled without breaking. (See Applicants’ specification at paragraph [0027]).

Applicants acknowledge that claims must be given their broadest interpretation during patent examination. However, this interpretation must be a “**reasonable interpretation consistent with the specification**” (see MPEP 2111: emphasis added). Applicants’ specification repeatedly uses the term “pliable fabric” in a manner consistent with the plain meaning of this term. As such, the rigid card taught and suggested in Niwata is not a “pliable fabric.”

In rejecting the independent claims, the Examiner makes the following argument regarding the card in Niwata: “The card is interpreted to be a pliable fabric, as is conventional for transactions cards” (see Final OA at p. 3). Applicants respectfully disagree with this interpretation. Conventional transactions cards are formed of a hard rigid plastic material, not a pliable fabric.

For at least these reasons, Applicants respectfully ask the Board of Appeals to reverse the rejections with respect to claims 1 – 3.

#### **Claim Rejections: 35 USC § 103(a)**

Claim 4 is rejected under 35 USC § 103(a) as being unpatentable over USPN 6,070,794 (Niwata) in view of US 2003/0222137 (Nishimura). Applicants respectfully traverse.

Claim 4 recites that the secure document has artwork that comprises a bar code. The Examiner admits that Niwata does not teach these recitations. Applicants agree. The Examiner, however, attempts to cure this deficiency with paragraph [0090] in Nishimura. Applicants respectfully disagree.

Paragraph [0090] in Nishimura teaches that a card can have a barcode. By contrast, claim 4 recites that “artwork” on the secure document has a barcode. Nishimura is completely silent on artwork having a barcode.



For at least these reasons, Applicants respectfully ask the Board of Appeals to reverse the rejections.

**Claim Rejections: 35 USC § 103(a)**

Claim 5 – 7 are rejected under 35 USC § 103(a) as being unpatentable over USPN 6,070,794 (Niwata) in view of US 2003/0222137 (Nishimura) and USPN 4,855,584 (Tomiya). Applicants respectfully traverse.

Claim 5 recites that the secure document has a bar code that comprises a watermark. The Examiner admits that Niwata and Nishimura do not teach these recitations. Applicants agree. The Examiner, however, attempts to cure this deficiency with Tomiyama. Applicants respectfully disagree.

In order to reject claim 5, the Examiner “interprets” a magnetic ink barcode as being a watermark (see Final OA at p. 4). Applicants respectfully ask the Board of Appeal to interpret each word in the claim in accordance with its plain meaning. Clearly, a watermark is not the same as a magnetic ink bar code.

For at least these reasons, Applicants respectfully ask the Board of Appeals to reverse the rejections.

Claims 6 and 7 are allowable for at least the reasons provided in connection with independent claim 1.

**Claim Rejections: 35 USC § 103(a)**

Claim 8 – 9 and 59 are rejected under 35 USC § 103(a) as being unpatentable over USPN 6,070,794 (Niwata) in view of USPN 5,971,282 (Rollender). Applicants respectfully traverse.

Claims 8 and 9 recites that the secure document further includes a sensor that “detects a chemical signature.” The Examiner admits that Niwata does not teach these recitations. Applicants agree. The Examiner, however, attempts to cure this deficiency with Rollender. Applicants respectfully disagree.

The Examiner never cites a location in Rollender for teaching or suggesting a sensor that detects chemical signatures. In fact, Applicants respectfully argue that the Examiner has ignored these claim elements. Instead of addressing the actual words

recited in the claim and giving weight to each word, the Examiner makes a broad conclusion that since Rollander teaches a card that can sense, Rollander must therefore teach a sensor that detects chemical signatures. This reasoning has no support whatsoever in the art of record.

For at least these reasons, Applicants respectfully ask the Board of Appeals to reverse the rejections.

**Claim Rejections: 35 USC § 103(a)**

Claim 10 – 16, 53 – 55, 57, 58, and 60 – 62 are rejected under 35 USC § 103(a) as being unpatentable over USPN 6,070,794 (Niwata) in view of US 2005/0116816 (Nitou). Applicants respectfully traverse.

Independent claims 10 and 53 recite a “currency” that comprises “a pliable fabric.” As noted above in connection with independent claim 1, Niwata teaches a rigid card, not a currency that is a pliable fabric. Nitou does not cure these deficiencies.

For at least the reasons provided above with respect to independent claim 1, independent claims 10 and 53 and their dependent claims are allowable over Niwata and Nitou.

Further, independent claim 10 recites that authentication information is stored in a memory in the currency. This authentication information indicates whether an RF reader device is authorized to communicate with the currency. Likewise, independent claim 53 recites that the currency includes a security module. This security module authenticates a reader device in order to authorize data to be written to and read from memory. The combination of Niwata and Nitou does not teach or suggest these elements.

The Examiner appears to admit that Niwata does not teach these elements (see Final OA at p. 5). Applicants agree. The Examiner, however, attempts to cure these deficiencies with Nitou. Applicants respectfully disagree.

Nitou teaches a vehicle theft protection system, not a currency. In order to establish a prima facie case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings.

Where is the suggestion or motivation to modify the credit card type device in Niwata with a vehicle theft protection system in Nitou? No such suggestion or motivation exists.

Further, Applicants respectfully assert that the Examiner is using knowledge of Applicants' invention and then performing hindsight reconstruction to show the various claim elements. In other words, the Office Action is picking and choosing unrelated teachings from different references with no suggestion to do so. On this subject, the case law is clear: One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988).

For at least the reasons, independent claims 10 and 53 and their dependent claims are allowable over Niwata and Nitou.

Claim 11 recites that the currency includes human-readable currency information that comprises at least one of a human-readable identifier and a human-readable denomination. Nowhere does Niwata or Nitou, alone or in combination, teach currency that has "human-readable currency information." The Examiner has ignored this recitation and does not cite any location in the art of record for teaching or suggesting currency with human-readable currency information. Instead, the Examiner provides personal opinion or personal speculation and states that "human readable identifiers are well known and conventional in the art to provide information, and therefore are not an obvious expedient."

For at least these reasons, claim 11 is allowable over Niwata in view of Nitou.

Dependent claims 12 and 13-15 are allowable for at least the reasons provided in connection with respect to independent claim 10.

Claim 16 recites that the currency includes a memory. This memory "stores information indicating whether the currency previously communicated with a radio frequency reader device." Nowhere does Niwata or Nitou, alone or in combination, teach currency that stores information indicating whether it previously communicated with an RF reader. The Examiner has ignored this recitation and does not cite any location in the art of record for teaching or suggestion storing such information. Instead, the Examiner provides personal opinion or personal speculation and states that "it would have been

obvious to one of ordinary skill in the art that by looking at the log, one would see if a radio frequency reader had communicated with the card, but the transaction data.”

For at least these reasons, claim 16 is allowable over Niwata in view of Nitou.

Claim 57 recites that the currency includes a memory. This memory “stores information regarding whether the memory was previously accessed from a reader device.” Nowhere does Niwata or Nitou, alone or in combination, teach currency that stores information indicating whether it previously communicated with a reader device. The Examiner has ignored this recitation and does not cite any location in the art of record for teaching or suggesting storing such information. Instead, the Examiner provides personal opinion or personal speculation and references the arguments of dependent claim 16 (i.e., “it would have been obvious to one of ordinary skill in the art that by looking at the log, one would see if a radio frequency reader had communicated with the card, but the transaction data”).

For at least these reasons, claim 57 is allowable over Niwata in view of Nitou.

Claim 58 recites that the currency includes a memory. This memory “stores information regarding whether the currency was previously **tampered with**” (emphasis added). Nowhere do Niwata and Nitou, alone or in combination, teach currency that stores information indicating whether it previously “tampered with.” The Examiner has ignored this recitation and does not cite any location in the art of record for teaching or suggesting storing information about tampering. Instead, the Examiner provides personal opinion or personal speculation and states “that if tampering occurred, such as altering of card data, it would have been obvious that it could appear in the log data, through improper data.”

For at least these reasons, claim 58 is allowable over Niwata in view of Nitou.

Claim 62 recites that the currency includes a decoder implemented “as a **finite state machine**” (emphasis added). Nowhere do Niwata and Nitou, alone or in combination, teach currency that has a decoder implemented as a “finite state machine.” The Examiner has completely ignored this recitation and does not cite any location in the art of record for teaching or suggesting a finite state machine.

For at least these reasons, claim 62 is allowable over Niwata in view of Nitou.

**Claim Rejections: 35 USC § 103(a)**

Claim 17 is rejected under 35 USC § 103(a) as being unpatentable over USPN 6,070,794 (Niwata) in view of US 2005/0116816 (Nitou) and US 2005/0023361 (Ikefuji). Applicants respectfully traverse.

Claim 17 recites a currency that has an integrity meter. This meter “determines the integrity of a connection between the security module and the pliable fabric.” The Examiner admits that Niwata and Nitou do not teach this element. Applicants agree. The Examiner, however, attempts to cure this deficiency with Ikefuji. Applicants respectfully disagree.

Ikefuji teaches a sensor that detects when an integrated circuit card is opened. This IC chip, however, never determines the integrity of the connection. Making a determination if a connection is open is quite different from making a determination as to the integrity of the connection. Further, Applicants respectfully argue that no suggestion or motivation exists to apply Ikefuji to “currency.”

For at least these reasons, claim 17 is allowable over Niwata in view of Nitou and Ikefuji.

**Claim Rejections: 35 USC § 103(a)**

Claim 56 is rejected under 35 USC § 103(a) as being unpatentable over USPN 6,070,794 (Niwata) in view of US 2005/0116816 (Nitou) and USPN 6,669,100 (Rogers). Applicants respectfully traverse. Claim 56 is allowable for at least the reasons provided with respect to independent claim 53.

**Claim Rejections: 35 USC § 103(a)**

Claim 59 is rejected under 35 USC § 103(a) as being unpatentable over USPN 6,070,794 (Niwata) in view of USPN 5,971,282 (Rollender) and US 2005/0116816 (Nitou). Applicants respectfully traverse. Claim 59 is allowable for at least the reasons provided with respect to independent claim 53.

### **CONCLUSION**

In view of the above, Applicants respectfully request the Board of Appeals to reverse the Examiner's rejection of all pending claims.

Any inquiry regarding this Amendment and Response should be directed to Philip S. Lyren at Telephone No. 832-236-5529. In addition, all correspondence should continue to be directed to the following address:

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Respectfully submitted,

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### **VIII. Claims Appendix**

1. A secure document, comprising:
  - a pliable fabric comprising human-readable information;
  - a memory attached to the pliable fabric in which machine-readable information about the secure document is stored; and
  - an interface attached to the pliable fabric and coupled to the memory that, when a reader device reads the secure document, transmits at least a portion of the machine-readable information stored in the memory to the reader device, wherein the machine-readable information includes data of plural transactions in which the secure document was previously used.
2. The secure document of claim 1, wherein the secure document is secure currency.
3. The secure document of claim 2, wherein the pliable fabric comprises artwork that includes the human-readable information.
4. The secure document of claim 3, wherein the artwork comprises a bar code.
5. The secure document of claim 4, wherein the bar code comprises a watermark.
6. The secure document of claim 4, wherein the bar code is printed using magnetic ink.
7. The secure document of claim 1, wherein the pliable fabric comprises at least one of cloth, paper, and laminate.
8. The secure document of claim 1, further comprising a sensor, wherein when the secure document is read by the reader device, information generated by the sensor is supplied to the reader device.
9. The secure document of claim 8, wherein the sensor detects a chemical signature.

10. A currency, comprising:

- a pliable fabric comprising human-readable currency information; and
- a security module comprising:
  - a memory attached to the pliable fabric in which machine-readable currency information and authentication information are stored; and
  - a radio frequency interface attached to the pliable fabric and coupled to the memory; and
- wherein the authentication information indicates whether a radio frequency reader device is authorized to communicate with the currency so data can be read from and written to the memory.

11. The currency of claim 10, wherein the human-readable currency information comprises at least one of a human-readable identifier and a human-readable denomination.

12. The currency of claim 10, wherein the machine-readable currency information comprises at least one of a machine-readable identifier and a machine-readable denomination.

13. The currency of claim 10, wherein the radio frequency interface comprises a power extraction circuit that extracts power from the radio frequency field, wherein the extracted power powers the security module.

14. The currency of claim 10, wherein the radio frequency interface comprises a transmit circuit that transmits the at least a portion of the machine-readable currency information to the radio frequency reader device when the radio frequency interface receives the radio frequency field radiated by the radio frequency reader device.



15. The currency of claim 10, wherein the radio frequency interface comprises a receive circuit that extracts information encoded in the radio frequency field radiated by the radio frequency reader device.

16. The currency of claim 10, wherein the memory stores information indicating whether the currency previously communicated with a radio frequency reader device.

17. The currency of claim 10, further comprising an integrity meter that determines the integrity of a connection between the security module and the pliable fabric.

18. The currency of claim 17, wherein the integrity meter is coupled to a current source and comprises a resistive element in parallel with the current source and a conductive loop in parallel with the current source, wherein the conductive loop comprises a plurality of hooks that attach the security module to the pliable fabric.

19. A currency, comprising:

a fabric; and

a security module attached to the fabric, wherein the security module comprises a memory in which information about the currency is stored and an ink reservoir in which ink is stored; and

wherein when the security module receives a predetermined command, the security module releases the ink stored in the ink reservoir in order to mark the fabric.

20. The currency of claim 19, wherein the security module further comprises a duct coupled to the ink reservoir and the fabric.

21. The currency of claim 20, wherein the security module further comprises a heating element and wherein the security module releases the ink by causing the heating element to heat the duct when the currency receives the predetermined command.

22. – 52. (canceled)

53. A currency, comprising:

- a pliable fabric having human-readable currency information;
- a memory;
- an interface for communicating with a reader device; and
- a security module that authenticates the reader device in order to authorize data to be written to and read from the memory.

54. The currency of claim 53, wherein the security module allows the reader device access to the memory if authentication of the reader device is successful and denies access to the memory if authentication of the reader device is not successful.

55. The currency of claim 53, wherein the security module authenticates the reader device before write operations to the memory are performed.

56. The currency of claim 53, wherein the security module detects whether the currency is compromised due to tampering or wear.

57. The currency of claim 53, wherein the memory stores information regarding whether the memory was previously accessed from a reader device.

58. The currency of claim 53, wherein the memory stores information regarding whether the currency was previously tampered with.

59. The currency of claim 53 further comprising a sensor, and wherein the memory stores information generated by the sensor.

60. The currency of claim 53, wherein the memory stores data of plural transactions in which the currency was previously used.

61. The currency of claim 53, wherein the memory stores authentication data indicating whether the reader device is authorized to communicate with the currency.

62. The currency of claim 53, further comprising a decoder implemented as a finite state machine.

**IX. EVIDENCE APPENDIX**

None.

**X. RELATED PROCEEDINGS APPENDIX**

None.